

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Sorrells et al.

Appl. No. 09/550,644

Filed: April 14, 2000

Method and System for Down-For:

Converting an Electromagnetic Signal, Transforms for Same, and Aperture Relationships

Art Unit: 2681

Examiner: Gelin, J.

Atty. Docket: 1744.0010009 RECEIVED

JUL 2 4 2003

Technology Center 2600

## Fourth Supplemental Information Disclosure Statement

Commissioner for Patents Washington, D.C. 20231

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The reference numbering on the accompanying Form PTO-1449 for this Fourth Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' Third Supplemental Information Disclosure Statement, filed December 9, 2002.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

Applicants provide the following comments regarding the documents:

Documents AF50-AH50, AA51, AC51 and AF51 were cited in an Office Action in co-pending U.S. Patent Appl. No. 09/476,330, filed January 3, 2000, entitled, "Multi-Mode, Multi-Band Communication System," directed to related subject matter.

Document AI50 was cited in an Office Action in co-pending U.S. Patent Appl. No. 09/567,963, filed May 10, 2000, entitled, "Frequency Synthesizer Using Universal Frequency Translation Technology," directed to related subject matter.

Documents AB51, AD51 and AE51 were cited in an Office Action in co-pending U.S. Patent Appl. No. 09/526,041, filed March 14, 2000, entitled, "DC Offset, Re-radiation, and I/Q Solutions Using Universal Frequency Translation Technology," directed to related subject matter.

Document AH51 was cited in an Office Action in co-pending U.S. Patent Application Serial No. 09/476,092, filed January 3, 2000, entitled "Analog Zero IF FM Decoder and Embodiments Thereof, Such as the Family Radio Service," directed to related subject matter. Also cited in said Office Action were U.S. Patent Nos. 5,600,680 and 5,606,731, which have already been cited in the present application in the Second Supplemental Information Disclosure Statement of August 9, 2002.

Documents AI51, AA52 and AI52 are co-owned patents which are directed to related subject matter.

Documents AB52 and AN58-AP58 were cited in an Office Action in co-pending U.S. Patent Appl. No. 09/567,977, filed May 10, 2000, entitled, "Optical Down-converter Using Universal Frequency Translation Technology," directed to related subject matter.

Documents AC52-AE52 were cited in an International Search Report in PCT Appl. No. PCT/US02/35861, filed November 8, 2002, entitled, "Method and Apparatus for Reducing DC Offsets in a Communication System," directed to related subject matter.

Documents AF52, AG52, AK22-AM22 and AQ58 were cited in an International Search Report in PCT Appl. No. PCT/US01/15555, filed May 16, 2001, entitled, "Apparatus, System, and Method for Down-Converting and Up-Converting Electromagnetic Signals," directed to related subject matter. Also cited in said Search Report were U.S. Patent Nos. 4,888,557, 5,454,007, 5,640,698 and 5,705,949, and PCT Publication No. WO 96/02977, which have already been cited in the present application in the Information Disclosure Statement of September 14, 2001.

Documents AH52 and AJ23 were cited in an Invitation to Pay Additional Fees in PCT Appl. No. PCT/US01/43077, filed November 14, 2001, entitled "Method and Apparatus for a Parallel Correlator and Applications Thereof," directed to related subject matter.

Documents AA53-AD53 were cited in an Office Action in co-pending U.S. Patent Application No. 09/986,764, filed November 9, 2001, entitled "Method and Apparatus for Reducing DC Offsets in a Communication System," directed to related subject matter.

The other documents in the PTO-1449 do not fall within the above categories.

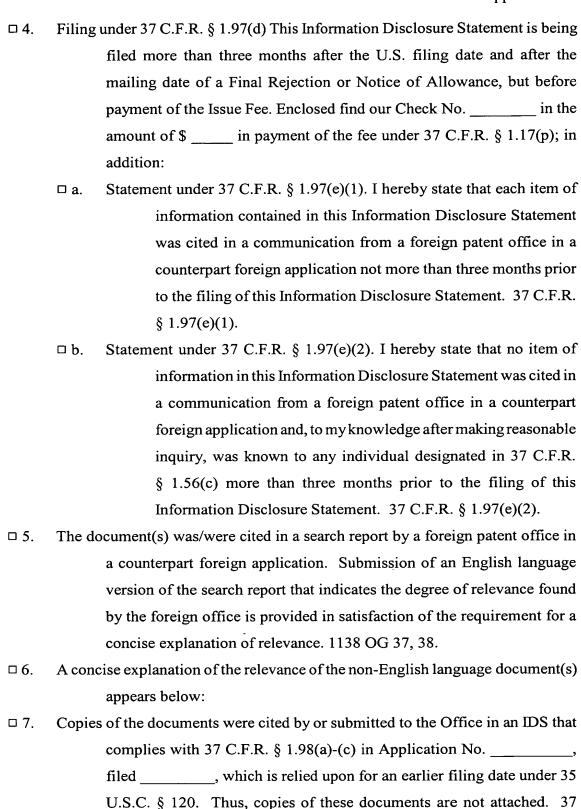
It is noted that some of these documents could be classified in more than one of the above categories.

This statement should not be construed as a representation that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

- □ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No statement or fee is required.
- □ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
  - □ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
  - □ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

□ c.	Attached is our PTO-2038 Credit Card Pay	ment Form [OR] Check No
	in the amount of \$	in payment of the fee under
	37 C.F.R. § 1.17(p).	



C.F.R. § 1.98(d).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Michael Q. Lee

Attorney for Applicants Registration No. 35,239

Date: 7/23/03

1100 New York Avenue, N.W. Washington, D.C. 20005-3934 (202) 371-2600

::ODMA\MHODMA\SKGF\_DC1;158209;1



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• Practice Limited to
Federal Agencies

July 23, 2003

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Commissioner for Patents PO Box 1450 Alexandria, VA 22313-1450

JUL 2 4 2003

Technology Center 2600

Re:

U.S. Non-Provisional Utility Patent Application

Appl. No. 09/550,644; Filed: April 14, 2000

Method and System for Down-Converting an Electromagnetic Signal, Transforms for Same, and Aperture Relationships

Inventors: Sorrells et al. Our Ref: 1744.0010009

Sir:

Transmitted herewith for appropriate action are the following documents:

- 1. Fourth Supplemental Information Disclosure Statement;
- 2. A listing of the cited documents on Form PTO-1449 (4 pages);
- 3. Copies of thirty-five (35) cited documents; and
- 4. One (1) return postcard.

It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Sterne, Kessler, Goldstein & Fox P.L.L.c. : 1100 New York Avenue, NW : Washington, DC 20005 : 202.371.2600 f 202.371.2540 : www.skgf.com

Commissioner for Patents July 23, 2003 Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

Sterne, Kessler, Goldstein & Fox p.l.l.c.

Michael Q. Nee

Attorney for Applicants Registration No. 35,239

**Enclosures** 

 $:: ODMA\MHODMA\SKGF\_DC1; 158445; 1$ 

FORM PTO-1449

FOURTH SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO. 1744.0010009	APPLICATION NO. 09/550,644
APPLICANT Sorrells et al.	
FILING DATE	GROUP

						Ap	ril 14, 2000	2681			
U.S. PATENT DOCUMENTS											
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	AG50	3,767		10/19			oda et al.	<del>  Techno</del>	logy Cent	<del>er 2600</del>	
	AH50	3,852		12/19		Shen		965			
	AI50	4,220	0,977	09/19			anaka				
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EXAMINER INITIAL		DOC	UMENT NUM	BER	DATE		COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
	AK22	EP 0	P 0 643 477 A2 & A3		03/1995	EP				N/A	
	AL22	EP 0	0 877 476 A1		11/1998		EP			N/A	
	AM22	EP 0	977 351 A1		02/2000 EP		EP			N/A	
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**EXAMINER**: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant. ::ODMA\MHODMA\SKGF\_DC1;158009;1

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FOURTH SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENT

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ATTY. DOCKET NO. 1744.0010009	APPLICATION NO. 09/550,644	
APPLICANT Sorrells et al.		
FILING DATE April 14, 2000	GROUP 2681	

U.S. PATENT DOCUMENTS											
EXAMINER INITIAL			DOCUMENT DATE NUMBER		NAM	E		CLASS	SUB- CLASS	FILING DATE	
	AA51	5,016	6,242	05/19	91	Tang	Tang				
	AB51	5,937	7,013	08/19	99	Lam	Lam et al.		<b>ICEIN</b>	/FD	
	AC51	6,014	4,551	01/20	000	Peso	Pesola et al.				
	AD51	6,073	3,001	06/20	000	Soko	ler	J	JL 2 4 2	003	05/08/1998
	AE51	6,085	5,073	07/20			mo <i>et al</i> .	T l			03/02/1998
	AF51	6,400	0,963 B1	06/20			kler et al.	recnn	echnology Cen	nter 2000	05/21/1999
	AG51	6,230	0,000 B1	05/20			е				10/15/1998
	AH51	5,483	3,695	01/19	96	Pard	oen				
	AI51	6,542	2,722 B1	04/20	003	Sorre	ells <i>et al.</i>	r			04/16/1999
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	AJ23	wo	00/31659 A1		06/2000		PCT				N/A
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	AN	<u>58</u>	Dines, J.A.B. Journal of Se	, "Sma elected	nt Pixel Opto Topics in Q	oelectr uantur	onic Receiver Base n Electronics, IEEE	d on a Cha , Vol. 2, No	rge Sensitive	e Amplifier De 120 (April 199	esign, <b>" IEEE</b> 96).
	AO	<u>58</u>	Simoni, A. et al., "A Digital Camera for Machine Vision," 20th International Conference on Industrial Electric Control and Instrumentation, IEEE, pp. 879-883 (September 1994).								ustrial Electronics,
	АР	<u>58</u>	Stewart, R.W. and Pfann, E., "Oversampling and sigma-delta strategies for data conversion," <i>Electronics &amp; Communication Engineering Journal</i> , IEEE, pp. 37-47 (February 1998).  Rudell, J.C. <i>et al.</i> , "A 1.9-Ghz Wide-Band IF Double Conversion CMOS Receiver for Cordless Telephone Applications," <i>IEEE Journal of Solid-State Circuits</i> , IEEE, Vol. 32, No. 12, pp. 2071-2088 (December 1997).							Electronics &	
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**EXAMINER**: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant. ::ODMA\MHODMA\SKGF\_DC1;158009;1

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FORM PTO-1449

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ATTY. DOCKET NO. 1744.0010009	APPLICATION NO. 09/550,644	
APPLICANT Sorrells et al.		
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-	AA52	6,560,301 B1	05/20	003	Cook	et al.			0	04/16/1999
	AB52	6,098,046		08/2000 Cc 04/1995 Gc 09/1999 Gc 10/2000 Va 10/1996 Sv		er et al.			06/29/1998	
	AC52	5,410,326	_			stein	DE			
	AD52	5,956,025	_			den <i>et al.</i>	<b>SEIVED</b>	FD		
	AE52	6,127,941				Ryzin				02/03/1998
* **	AF52	5,564,097				Swanke		<del>  2 4 2003</del>		
	AG52	5,898,912	04/19			et al.	Technol	Day Contor	2600	
	AH52	4,660,164		1987 Le		owitz	T COITION	Ogy Center	2000	
	Al52	6,580,902 B1	06/20			ells et al.				04/16/1999
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FORM PTO-1449

FOURTH SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENT

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ATTY. DOCKET NO. 1744.0010009	APPLICATION NO. 09/550,644
APPLICANT Sorrells et al.	
FILING DATE	GROUP

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	AA53	4,857,928	08/19	8/1989		s et al.			
	AB53	5,389,839	02/19	/1995 F					
	AC53	5,471,665	11/19	95	Pace	et al.			
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